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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,395

09/16/2004

A. John Speranza

03-023

5394

31661 7590 01/17/2007  
PROTON ENERGY SYSTEM  
10 TECHNOLOGY DRIVE  
WALLINGFORD, CT 06492

EXAMINER

RAMILLANO, LORE J

ART UNIT

PAPER NUMBER

1743

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

9

<b>Office Action Summary</b>	<b>Application No.</b> 10/711,395	<b>Applicant(s)</b> SPERANZA ET AL.	
	<b>Examiner</b> Lore Ramillano	<b>Art Unit</b> 1743	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2006.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 1-9, 19-27 and 33-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-18 and 28-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                  |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                      | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                             | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/27/06</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### Election/Restrictions

1. Applicant's election without traverse of Group II, claims 10-18 and 28-32 in the reply filed on 10/25/06 is acknowledged.
2. Claims 1-9, 19-27, and 33-43 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/25/06.

### Response to Amendment

3. The rejections over the prior art are withdrawn. New rejections follow.

### Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. **Claims 10-18 and 28-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brosnihan et al. ("Brosnihan," US 2003/0090164) in view of Ovshinsky et al. ("Ovshinsky," US 6305442) and Werth (US 5510201).

Brosnihan disclose a system comprising an electrical generator (70); a valve (i.e. solenoid valve), which may be operated to release hydrogen cooling gas from the electrical generator in response to a signal from the purity monitor [0024]); a purity monitor (hydrogen gas purity monitoring module, 20, Figs. 2 and 3); a pressure monitor [0027]-[0028]; a hydrogen purifier (hydrogen gas purity monitoring module monitors hydrogen cooling gas to optimize purity levels, [0020]-[0021]); and a signal is provided by the purity monitor when the purity of the hydrogen gas is lowered [0020]-[0021].

Brosnihan does not specifically disclose having a hydrogen generator, which is an electrochemical generator having at least one polymer electrode membrane or producing hydrogen gas by reformation of natural gas.

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In Fig. 3, Ovshinsky discloses a system comprising a hydrogen generator (32), which includes an electrochemical generator having at least one polymer electrode membrane (i.e. column 8, line 66 to column 9, line 21) or a generator that produces hydrogen gas by reformation of natural gas (column 8, lines 45-46); an electrical generator (31) coupled to the hydrogen generator; and a hydrogen purifier (33) coupled to the generator.

Brosnihan and Ovshinsky are analogous art because they are from the same field of endeavor, systems involving hydrogen-related generators. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Brosnihan by including the hydrogen generator of Ovshinsky because it would be desirable to have a complete infrastructure system that generates power, generates hydrogen, and purifies hydrogen since such system would be highly energy efficient since reusable energy is possible under this system. (i.e. column 5, lines 6-25).

Furthermore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Brosnihan by producing hydrogen via reformation of natural gas or by using a polymer electrode membrane because using reformed natural gas for the regeneration process is more cost-efficient compared to other alternative derivatives (column 1, lines 20-34, Werth) and using a polymer electrode membrane is particularly suitable for the regeneration process (column 12, lines 7-15, Werth).

### **Response to Arguments**

8. Applicant's arguments with respect to claims 10-18 and 28-32 have been considered but are moot in view of the new ground(s) of rejection.

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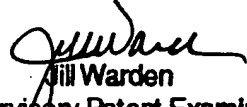
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lore Ramillano whose telephone number is (571) 272-7420. The examiner can normally be reached on Mon. to Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lore Ramillano  
Examiner  
Art Unit 1743

1/5/07

  
Jill Warden  
Supervisory Patent Examiner  
Technology Center 1700